

U. S. Department of Transportation

Alaskan Region

222 W. 7th Avenue #14 Anchorage, Alaska 99513-7587

Federal Aviation Administration

Harvey Douthit, P.E. State of Alaska DOT&PF Central Region P.O. Box 196900 Anchorage, Alaska 99519-6900

Dear Mr. Douthit:

Perryville Airport Airport Layout Plan (ALP) Approval 04-AAL-165-NRA

We have completed a review of the "revised" ALP for the Perryville Airport. The ALP is conditionally approved. This approval is subject to the condition that future development may not be undertaken without environmental approval by the Federal Aviation Administration.

We have enclosed a copy of the signed ALP for your records. Contact Gabriel Mahns at 271-3665 if you have any questions.

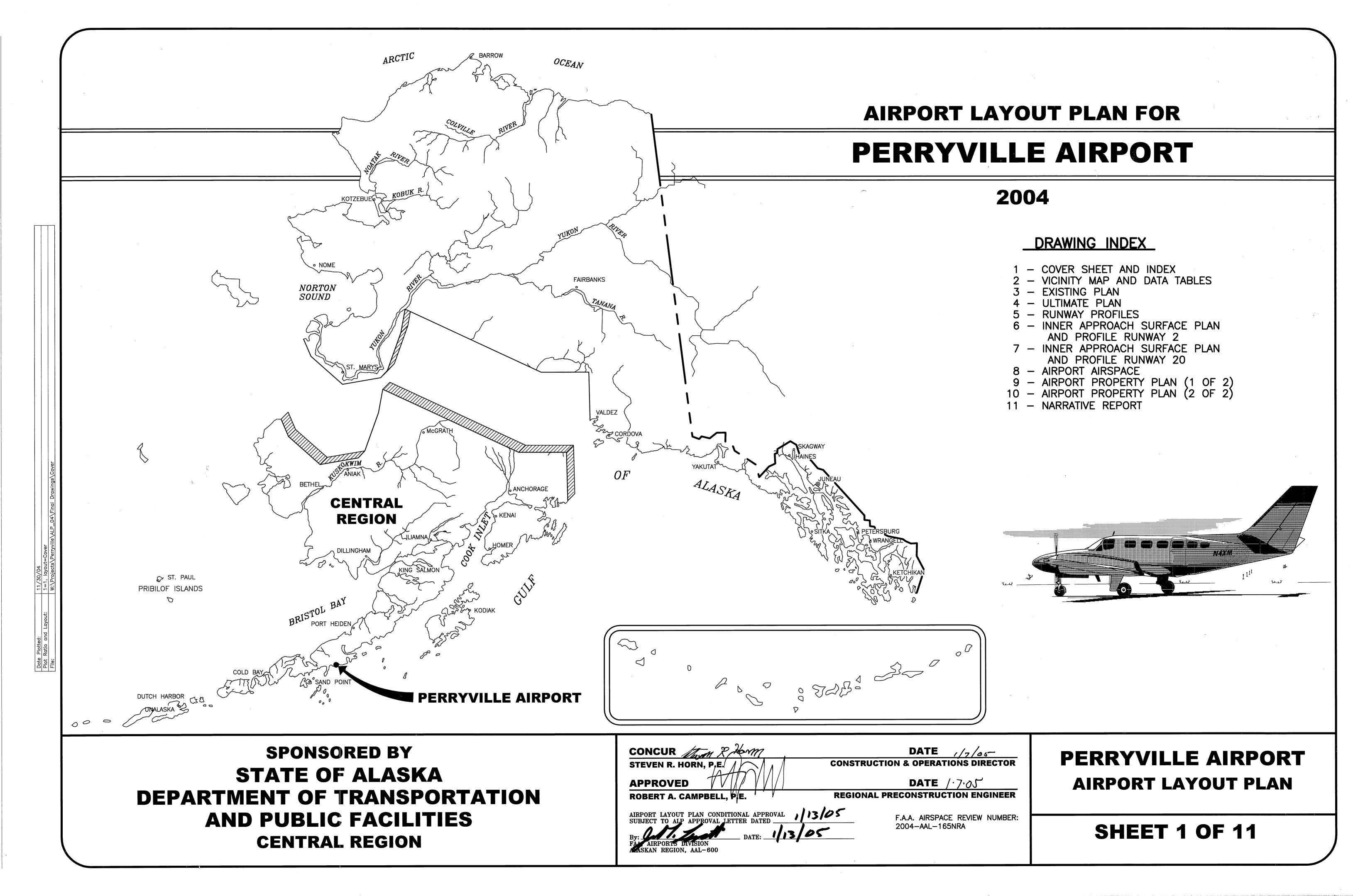
Sincerely,

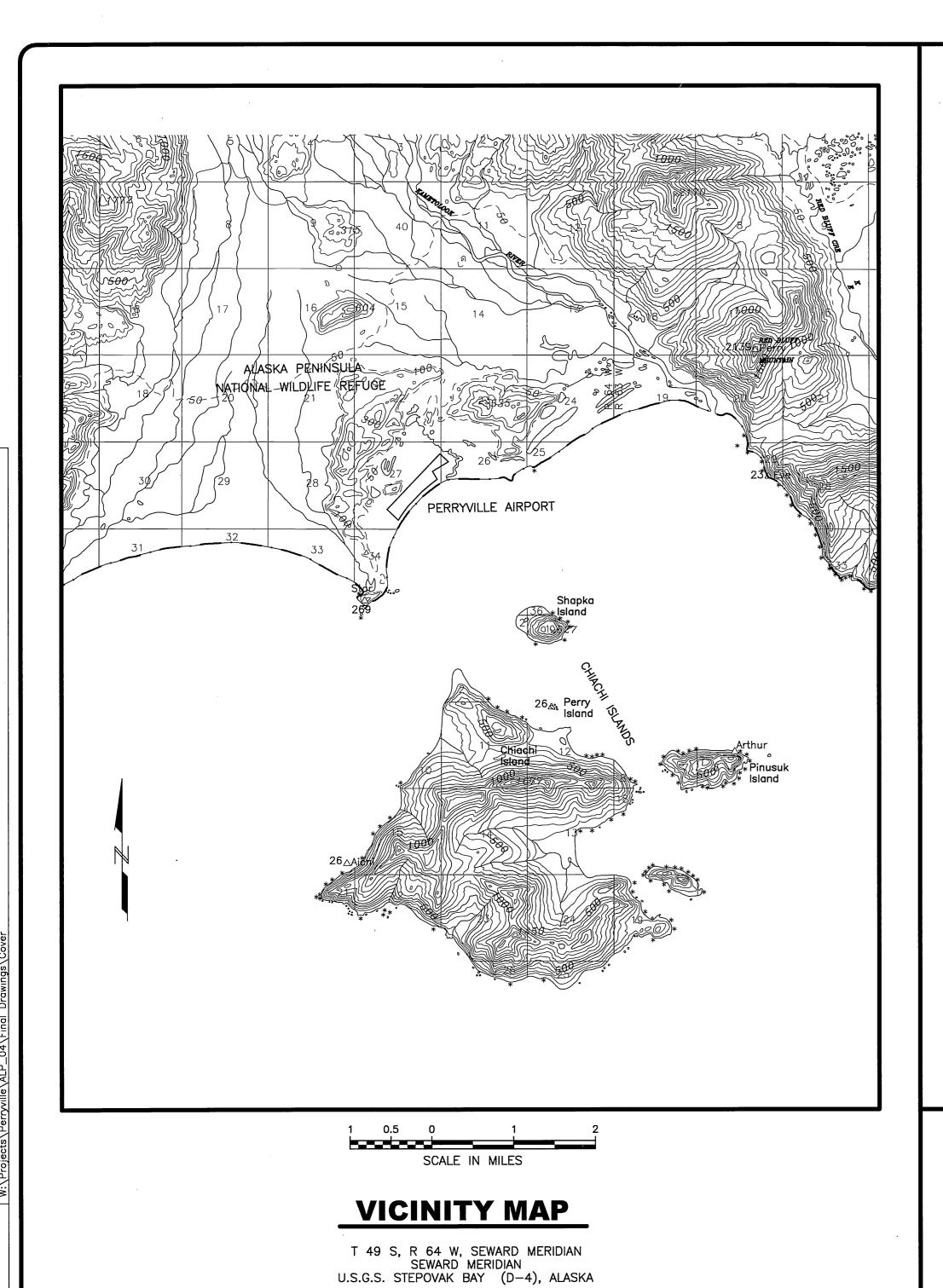
Debie Roth

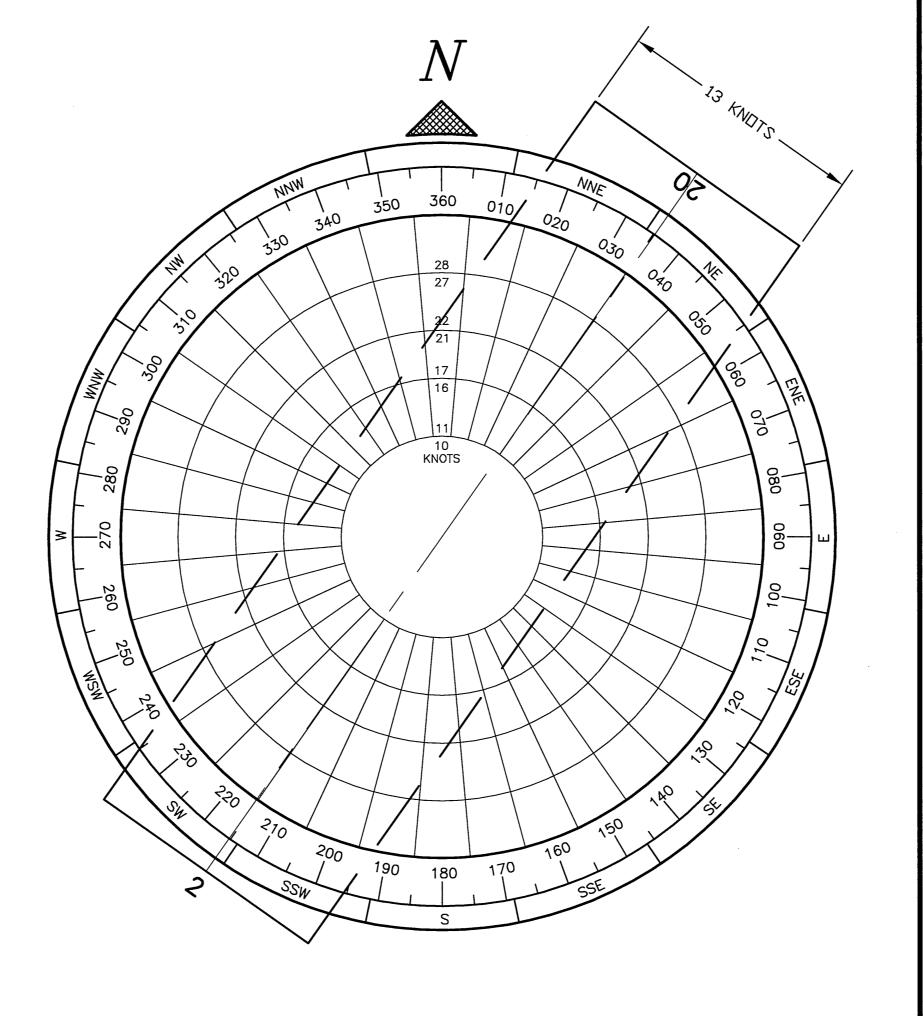
Deputy, Airports Division

Enclosures: Perryville ALP

cc: AAL-530, ANC FPO/AVN







# WIND DATA

NOTE: WIND DATA NOT AVAILABLE. RUNWAY ORIENTATION DETERMINED BY LIMITATIONS OF TERRAIN

LEGEND				
ITEM	EXISTING	ULTIMATE		
AIRPORT REFERENCE POINT (A.R.P.)				
ANTENNA				
BLUFF		<del>                                     </del>		
BUILDINGS				
BUILDING RESTRICTION LINE		BRL —		
FENCE	- <del>x x x</del>	-xxx-		
PAPI		0000		
PROPERTY LINE				
REIL	<b>€</b> □	Ø		
ROADWAYS				
ROTATING BEACON	<del>}</del> ●€	>0€		
SHORELINE				
SURVEY MONUMENT		$\Box$		
THRESHOLD MARKERS/LIGHTS	••• •••	$\infty \infty$		
TOPOGRAPHIC CONTOURS	100	100		
TREE (LARGE SINGLE)	₩	₩		
TREELINE		www		
VASI	= = =	00		
WIND CONE	<u>_</u>	Į Į		
WIND CONE AND SEGMENTED CIRCLE	r(1)-1	r(1)-1		

	EXISTING	NEAR TERM	ULTIMATE
	NONE	NONE	NONE
	AK5	AK5	AK5
	29'	30'	30'
LAT.	55 <b>ʻ</b> 54'03"N	55 <b>*</b> 54 <b>'</b> 24 <b>"</b> N	55°54'24"N
LONG.	159'09'20"W	159°09'39"W	159 <b>°</b> 09'39"V
	ΑI	BII	BII
	55 F JULY	55 F JULY	55 F JUL
	NONE	GPS	GPS
	NONE	ROTAT BEACON	ROTAT BEAC
	NONE/NA	M. I. / NA	M. I. / NA
	NONE/NA	NONE / NA	NONE / NA
		<u> </u>	ANP
		AK5 29'  LAT. 55'54'03"N  LONG. 159'09'20"W  A I  55 F JULY  NONE  NONE  NONE/NA  NONE/NA  NONE/NA	AK5 29' 30' LAT. 55°54'03"N 55°54'24"N LONG. 159°09'20"W 159°09'39"W A I B II 55 F JULY 55 F JULY NONE GPS NONE ROTAT BEACON NONE/NA M. I. / NA NONE/NA NONE / NA

RUN	IWA	DATA	TABLE		
		RUNWA	Y 3/21	RUNWAY	2/20
ITEM		EXISTING	NEAR TERM	NEAR TERM	ULTIMATE
APPROACH SURFACES		20:1/ 20:1		20:1/20:1	20:1/20:1
VISIBILITY MINIMUM		VISUAL		>1 MILE/ >1 MILE	>1 MILE/ >1 MILE
INSTRUMENT RUNWAY		NONE / NONE		NPI / NPI	NPI / NPI
RUNWAY SURFACE		GRAVEL		GRAVEL	GRAVEL
PAVEMENT STRENGTH	lbs.	N/A		N/A	N/A
RUNWAY TYPE		UTILITY		UTILITY	UTILITY
RUNWAY DIMENSIONS		50' X 2100'		75' X 3300'	75' X 3300'
AIRCRAFT APPROACH CATEGORY		A / A		B / B	B / B
AIRCRAFT DESIGN GROUP		1/1		11 / 11	11 / 11
RUNWAY TRUE BEARING		N42° 50' 06"E		N35°12'45"E	N35'12'45"E
EFFECTIVE GRADE		0.2 %		0.2 %	0.2 %
TOUCHDOWN ZONE ELEVATION (MSL NAV	D88)	29' / 29'		30.0' / 30.0'	30.0' / 30.0'
RUNWAY END COORDINATES (N.A.D. 83)					
RUNWAY 3	LAT.	55 <b>'</b> 54'20"N		N/A	N/A
	LONG.	159°09'46"W		N/A	N/A
RUNWAY 21	LAT.	55°54'38"N		N/A	N/A
	LONG.	159°09'16"W		N/A	N/A
RUNWAY 2	LAT.	N/A		55°54'10.92"N	
	LONG.	N/A		159°09'55.68"W	
RUNWAY 20	LAT.	N/A		55*54'37.49"N	
	LONG.	N/A	M	159°09'22.29"W	
RUNWAY SAFETY AREA (RSA)		100' X 2500'		150'x3900'	150'x3900'
LENGTH BEYOND R/W END		200'/200'		300'/300'	300'/300'
RUNWAY PROTECTION ZONE (RPZ)		N/A		500' X 700' X 1000'	
RUNWAY OBJECT FREE AREA (OFA)		N/A		500'x3900'	500'x3900'
RUNWAY OBSTACLE FREE ZONE (OFZ)		N/A		250'x3700'	250'x3700'
		Nove			
RUNWAY LIGHTING		NONE		M.I.	M.I.
RUNWAY MARKING		END PANELS		NONE	NONE
RUNWAY VISUAL AND INSTRUMENT NAVAIL	DS	NONE		PAPI, REIL	PAPI, REIL

# NON-STANDARD CONDITIONS AND/OR MODIFICATIONS TO STANDARDS

ITEM	NEAR TERM	STANDARD	ULTIMATE
RUNWAY 02/20 WIND COVERAGE*	UNKNOWN	95 %	UNKNOWN
RUNWAY TO LANDFILL SEPARATION	4000'	5000'	4000'

<sup>\*</sup> RUNWAY ORIENTATION DETERMINED BY LIMITATIONS OF TERRAIN, WIND DATA NOT AVAILABLE

TABLES ARE BASED ON ALP CHECKLIST (REVISED FOR ALASKA REGION - 7/06/2004)

AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL
SUBJECT TO ALP APPROVAL LETTER DATED

By:
FAA, ALPORTS DIVISION
ALASIAN REGION, AAL-600

F.A.A. AIRSPACE REVIEW NUMBER: 2004—AAL—165NRA

BY DATE

REVISIONS

DEPARTMENT OF ALASKA

AND PUBLIC FACILITIES

APPROVED:

HARVEY M. DOUTHIT, P.E.

APPROVED:

GARY E. LINCOLN, P.E.

CENTRAL REGION

DESIGN SECTION CHIEF

PROJECT MANAGER

DATE 12-20-64

DESIGN CW

DRAWN 95

CHECKED W

PERRYVILLE AIRPORT

AIRPORT LAYOUT PLAN

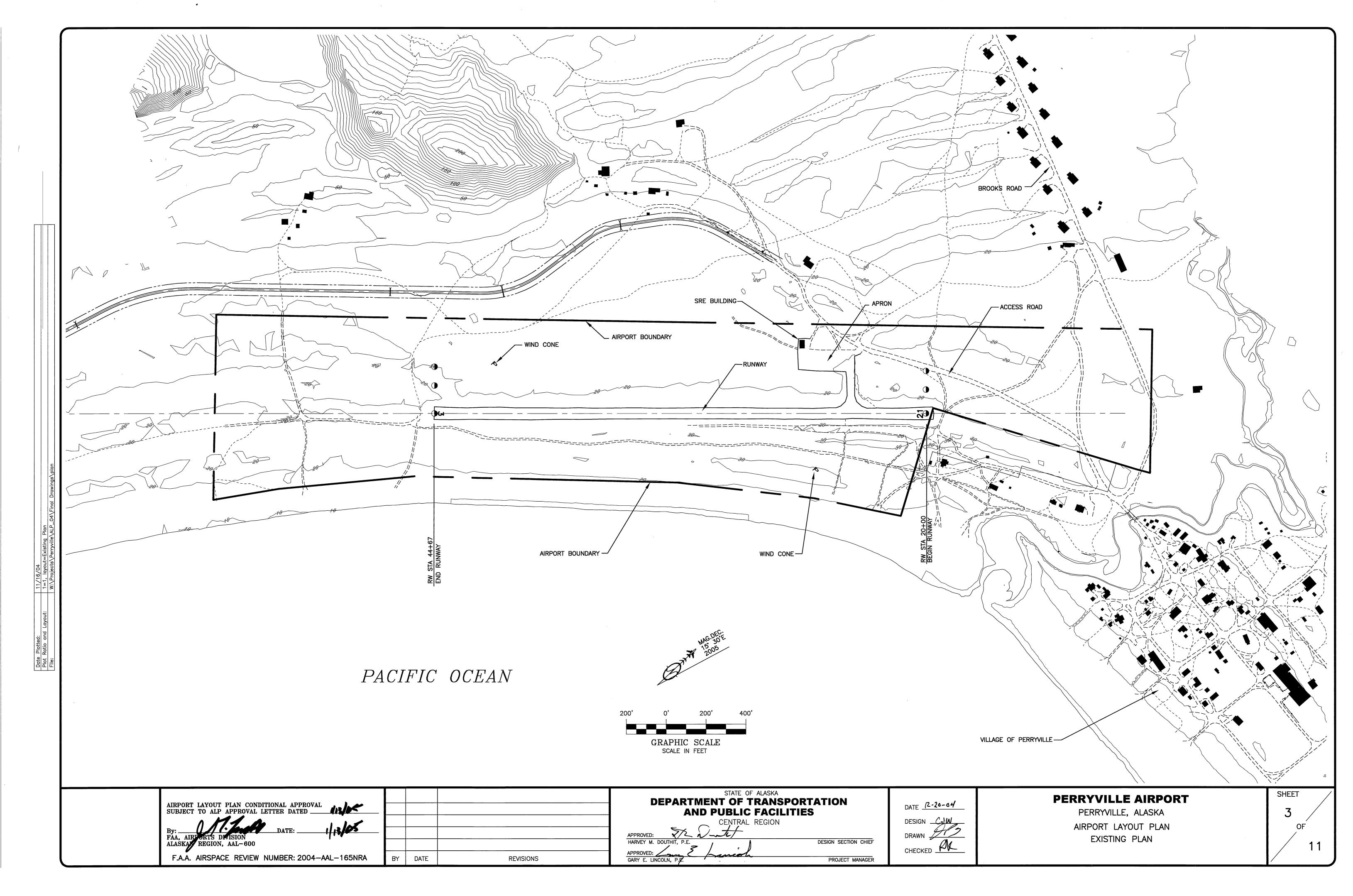
VICINITY MAP AND DATA TABLES

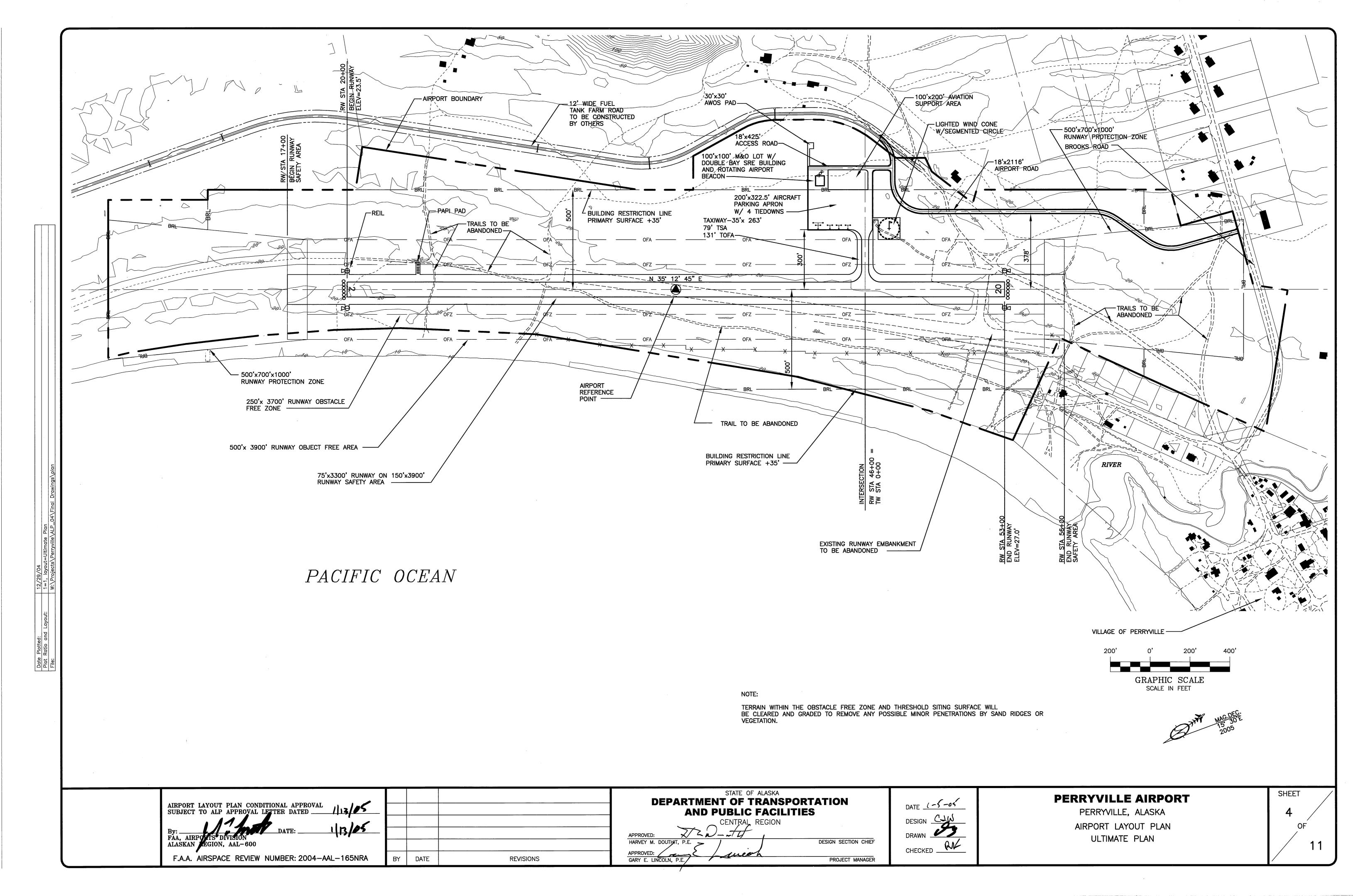
SHEET

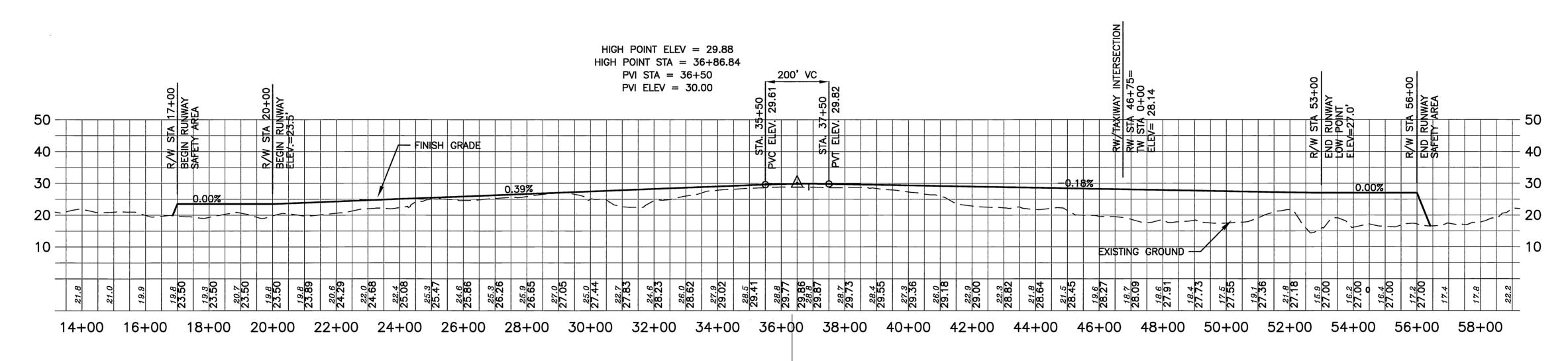
2

OF

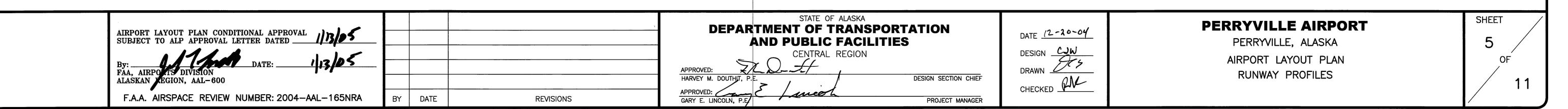
11





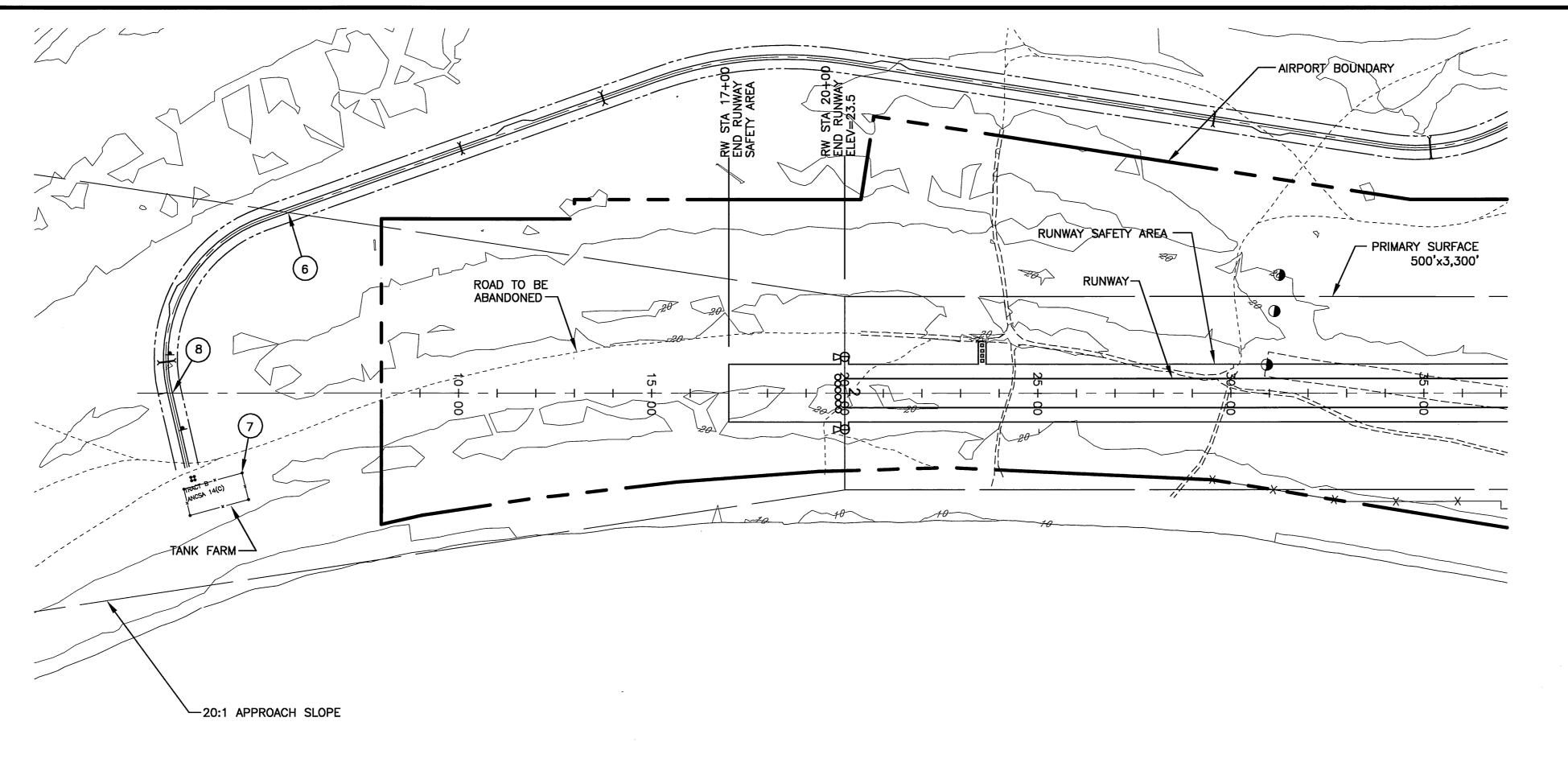


ULTIMATE RUNWAY 2/20



ayout: 1=1, layout=Runway Profiles W:\Projects\Perryville\ALP\_04\Final Drawings\

Date Plotted: Plot Ratio and Layout:

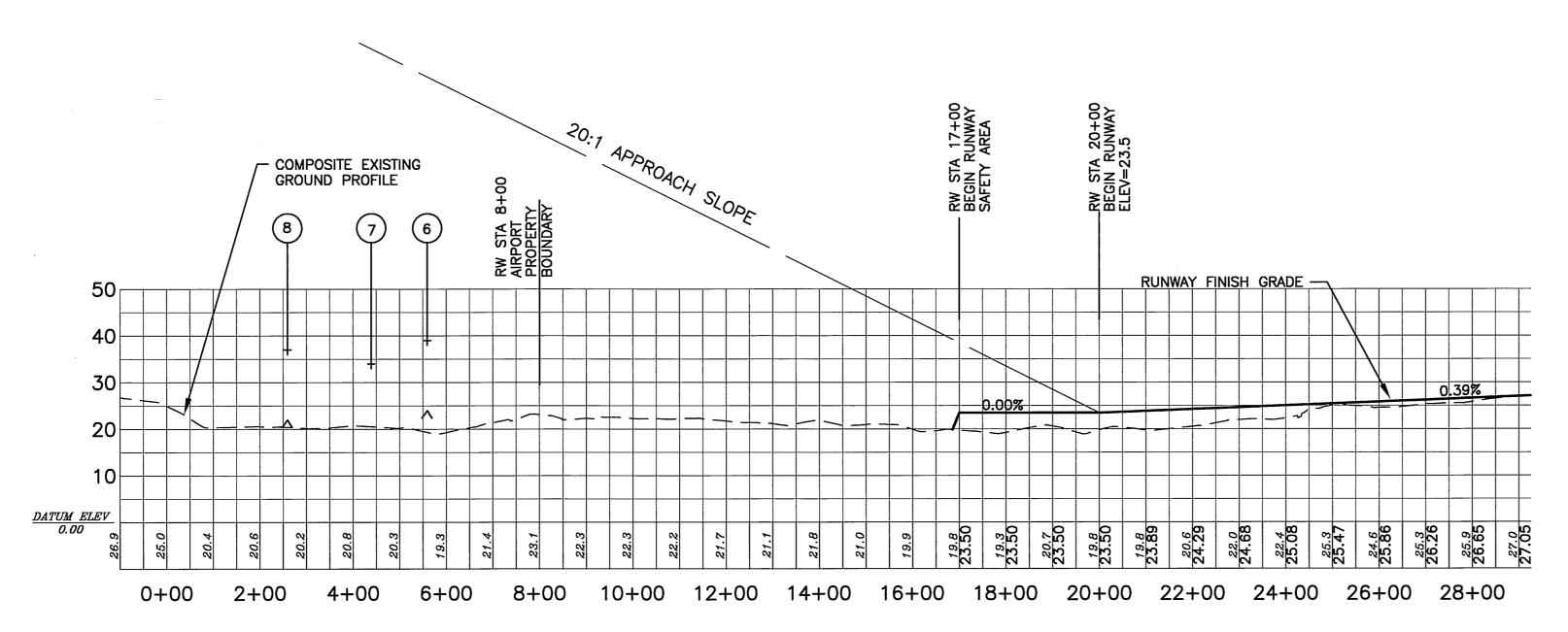


200'	0,	200'	400

GRAPHIC SCALE SCALE IN FEET

F.A.R. PA	ART 77 20:1 APPR	OACH SU	RFACE OF	STRUCTIO	N TABLE	(INNER F	ORTION F	RW 2)
OBSTRUCTION ID	DESCRIPTION	OBSTRUCTION DIST/OFFSET	OBSTRUCTION ELEVATION	SURFACE PENETRATED	SURFACE ELEVATION	AMOUNT OF PENETRATION	DISPOSITION	STAGE TO BE CORRECTED
6	ROAD	1441 466 R	39*	NONE	95.6	NONE	NO ACTION	N/A
7	TANK FARM FENCE	1561 206 L	34	NONE	101.6	NONE	NO ACTION	N/A
8	ROAD	1741 0	37*	NONE	110.6	NONE	NO ACTION	N/A

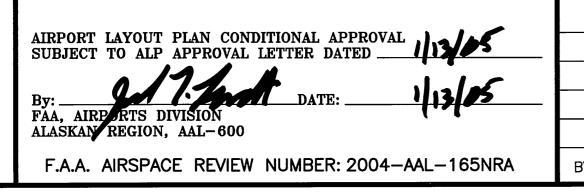
\* OBSTRUCTION ELEVATION INCLUDES 15' VEHICLE ON ROAD.



REVISIONS

# NOTES:

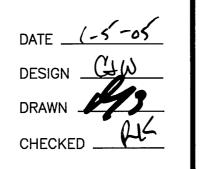
- 1. OBSTRUCTIONS EXIST IN F.A.R. PART 77 IMAGINARY SURFACES FOR RUNWAY 2. THE OBSTRUCTION CLEARANCE SLOPE IS ESTABLISHED AS 20:1 PER ORDER 5010, APPENDIX 1, PARA 57. THE CONTROLLING OBSTRUCTION IS OBSTRUCTION # 18 SHOWN ON THE AIR SPACE DRAWING.
- 2. THE APPROACH SLOPE BEGINS AT THE END OF THE PRIMARY SURFACE WHICH ALSO COINCIDES WITH THE THRESHOLD OF THE RUNWAY.
- 3. THE TOUCH DOWN ZONE ELEVATION FOR RW 2 IS 30.0' MSL (NAV88).
- 4. THE COMPOSITE EXISTING TERRAIN PROFILE IS BASED ON THE HIGHEST ELEVATION OF OBJECTS OR TERRAIN LYING UNDER THE RUNWAY APPROACH SURFACE OUTWARD TO A LINE WHERE THE APPROACH SURFACE ATTAINS A HEIGHT 100' ABOVE THE THRESHOLD ELEVATION.



DATE

## STATE OF ALASKA **DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES**

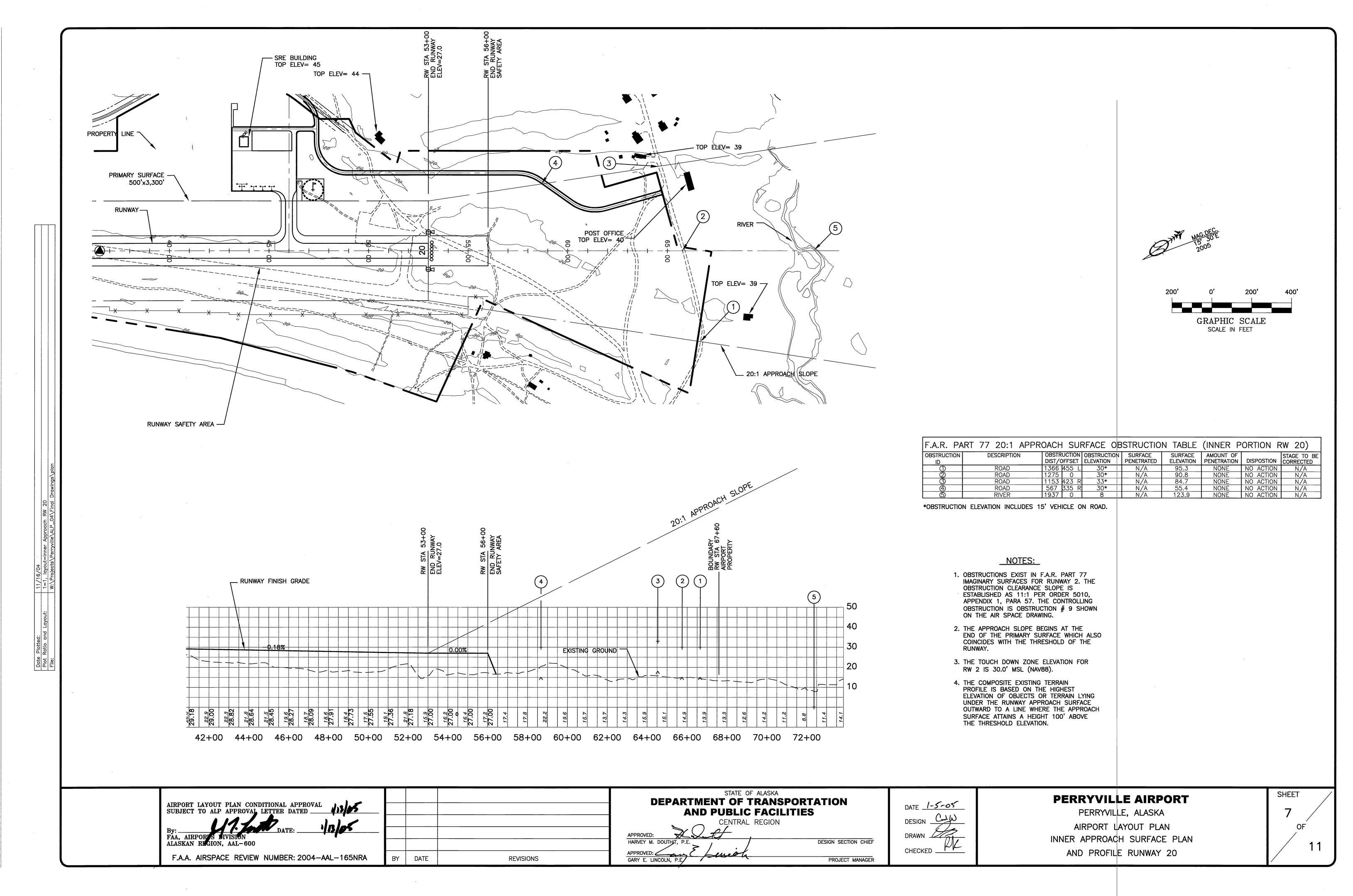
CENTRAL REGION APPROVED: HARVEY M. DOUTHIT, P.E. DESIGN SECTION CHIEF APPROVED: GARY E. LINCOLN, P.F. PROJECT MANAGER

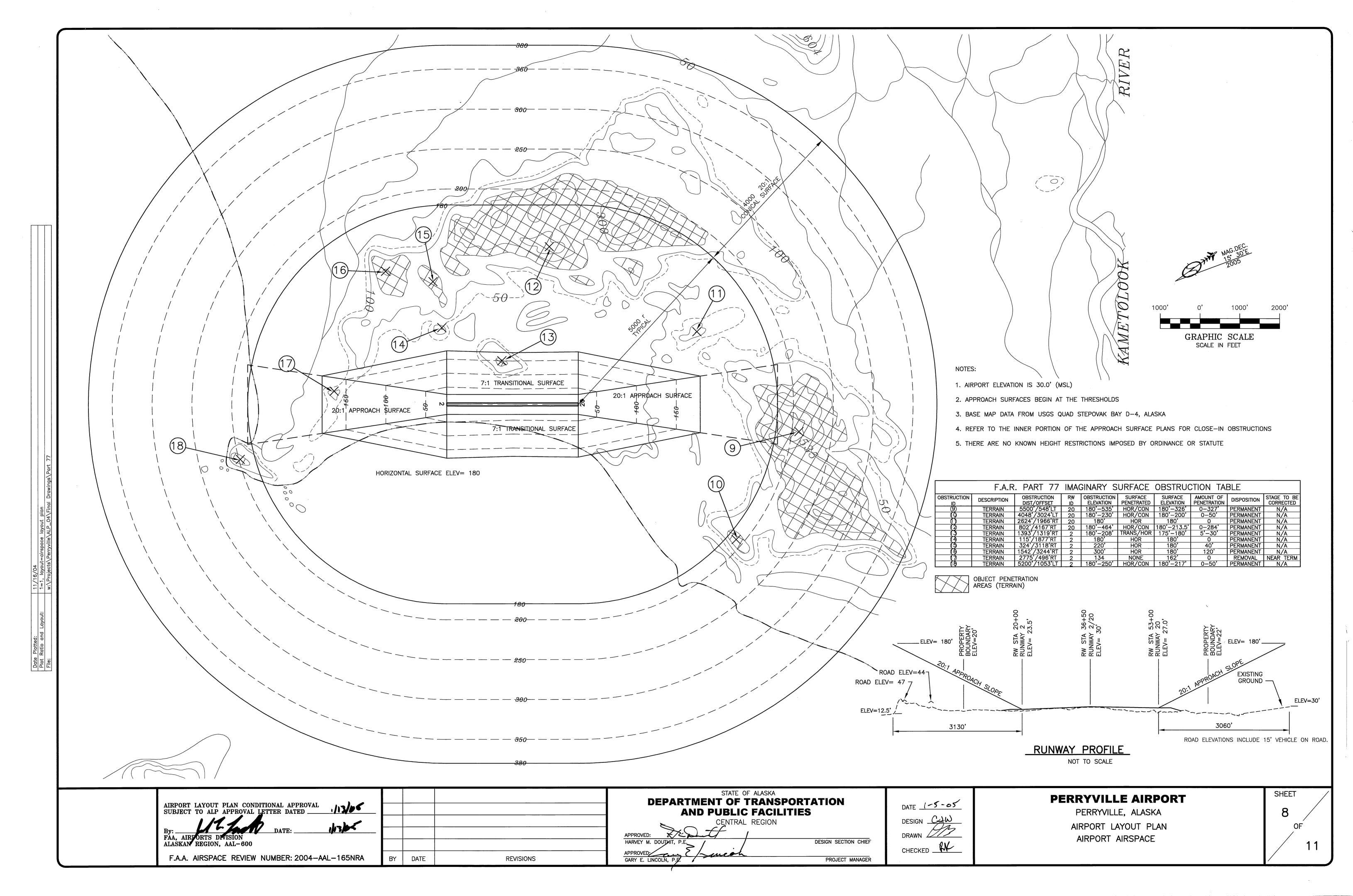


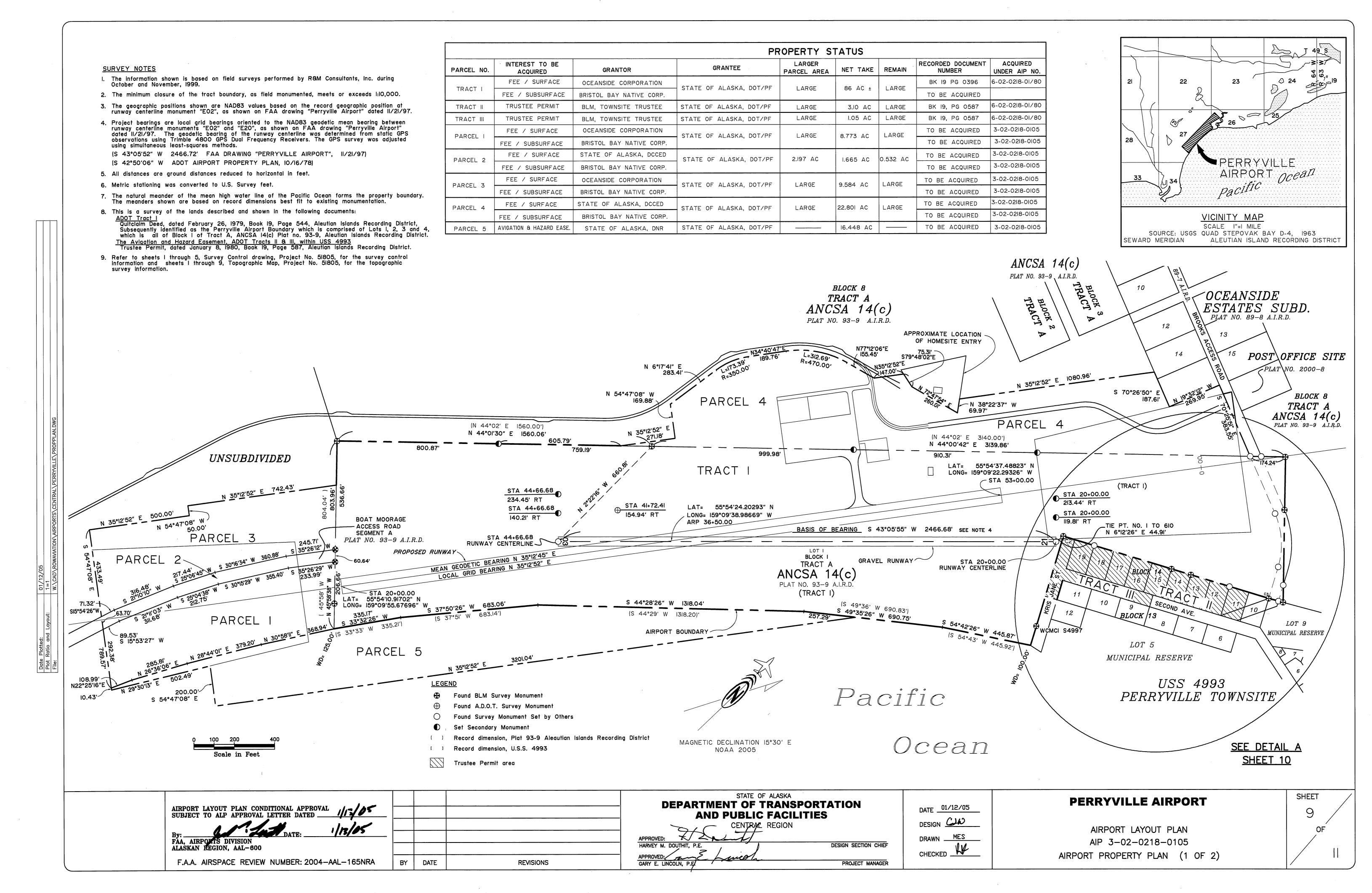
# PERRYVILLE AIRPORT

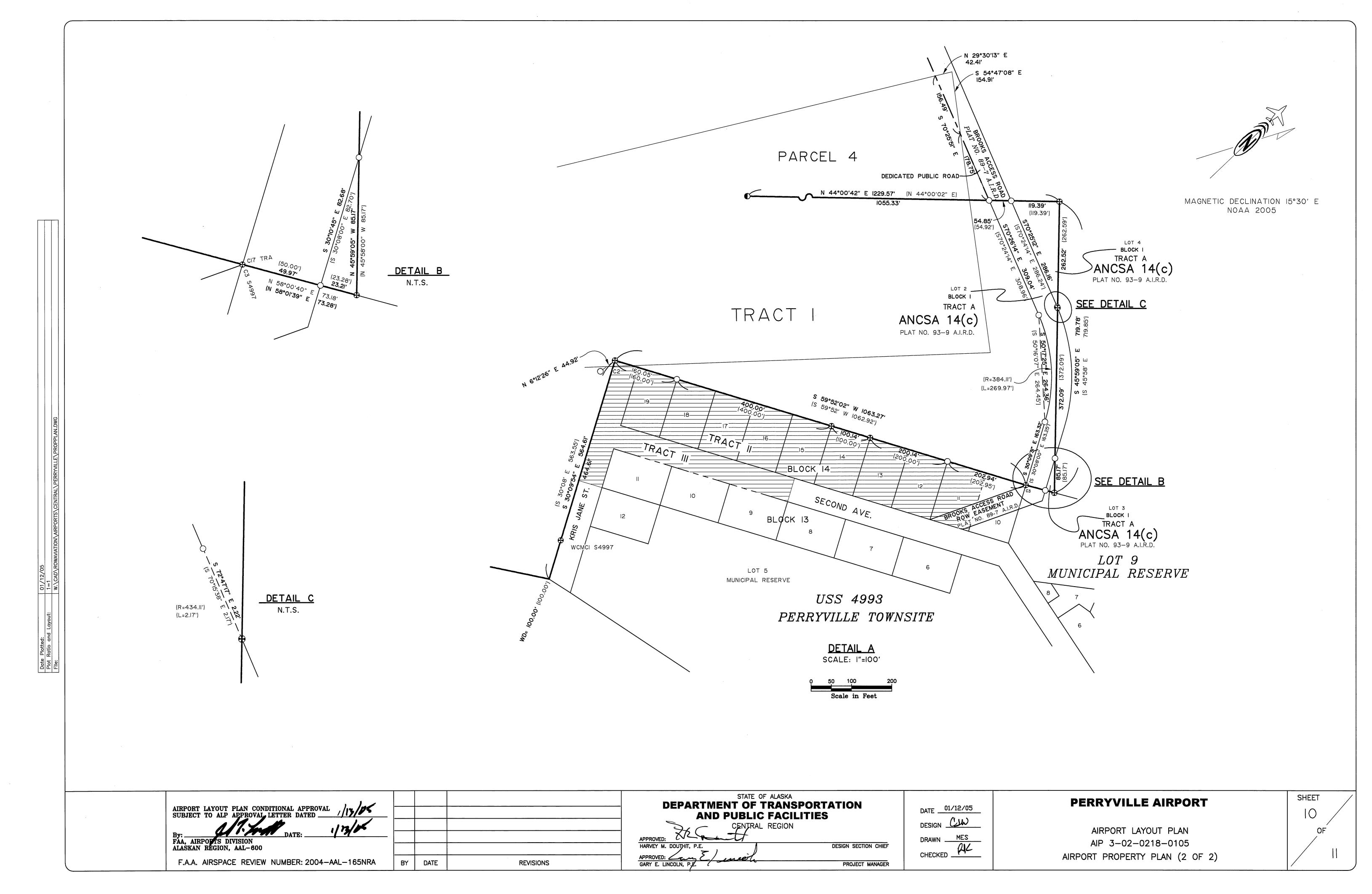
PERRYVILLE, ALASKA AIRPORT LAYOUT PLAN INNER APPROACH SURFACE PLAN AND PROFILE RUNWAY 2

SHEET









#### B. Introduction

Perryville is a rural unincorporated community located on the south coast of the Alaska Peninsula at the mouth of the Kametolook River, 275 miles southwest of Kodiak and 500 miles southwest of Anchorage. There are currently no roads to access Perryville from other communities and access by water is seasonally limited. The current population of Perryville is 106 (2003) and is projected to grow to 140 by 2020.

#### C. Airport Usage and Forecasts

#### 1. Current Usage

In the 1996 Alaska Aviation System Plan Update (AASPU), Perryville was classified as a Community Class Airport. This classification is not expected to change in the 20-year planning period. Aircraft operations at the airport support passenger traffic, mail and cargo distribution, school activities, and medical evacuations. Pen-Air has one scheduled daily commercial flight in a Cessna Caravan to Perryville originating from King Salmon. Non-scheduled air taxi services and charters are available from King Salmon, Dillingham, Bethel and Anchorage. One single engine general aviation aircraft is seasonally based at Perryville. Summer seasonal use increases dramatically because of construction projects and access to fishing and hunting areas.

Perryville Airport is primarily served by single engine aircraft such as Cessna 206 Skywagon (Design Group A-I) and 208 Caravan (Design Goup A-II). Some small twin-engine aircraft such as the piper Navajo (Design Group B-I) occasionally operate at the airport. Therefore, the airport should be designed to accommodate Category B. Group Il aircraft. Table 1 provides information for these aircraft.

Table

CRITICAL AIRCRAF	T CESSNA GRAND CARAVAN			
Approach Speed	< 91 Knots			
Wingspan	52.1 ft			
Weight	8750 lbs			
Airport Reference Code	A-II			
CRITICAL AIRCRAFT PIPER PA31 (NAVAJO)				
Approach Speed	> 91 KNOTS and < 121 KNOTS			
Wingspan	40.7 ft			
Weight	6,200 lbs			
Airport Reference Code	B-I			

The Airport Master Record (FAA Form 5010-1), last revised June 10, 2004 reports 100 air taxi and 200 general aviation itinerant operations per year. Such voluntary reports usually indicate fewer than actual experience. Based on a recent survey of air taxi operators they indicated 5 flights to 12 flights per week during the summer, and 5 to 15 flights per month during the winter. This results in a range of annual operations for the airport of 320 to 804 with an average of 560.

The latest voluntary reports of enplanements from the air carriers indicate 1111 passengers for 1999, 665 for 2000 and 864 for 2001, with an average of 880.

#### 2. Forecasted Usage

Forecasts are based on a combination of factors including past airport activity, available information about aircraft operations, socioeconomic factors, and demographics. After considering the economic basis driving operations at the airport, it appears reasonable to tie operational forecasts to population trends. Based on past historical population statistics the rate of future increase is estimated at 1% per year.

Table 2 provides an estimate of aircraft operations 5, 10, and 20 years into the future.

Table 2

AERONAUTICAL FORECASTS				
Activity	2004 2009 2014 2024 (Estimated) (Projected) (Projected)			
Operations	560	589	619	683

#### D. Desian Rationale

#### 1. Airport Reference Code (ARC)

Based on the critical aircraft projected to use Perryville Airport in the 20-year planning period, the airport will be improved to meet ARC B-II standards. Table 3 presents the existing and ultimate design standards for Perryville Airport.

#### 2. Airport and Terminal Navaids

The existing runway at Perryville currently has no medium intensity runway lights (MIRL). The runway has a visual flight rule (VFR) non-precision approach; however, according to FAA, Perryville has been identified for development for a Global Positioning System (GPS) non-precision instrument approach procedure.

#### 3. Wind Coverage

No wind observations have been recorded at Perryville. Using data from Sand Point and Chiqnik, the two closest stations to Perryville at 58 and 36 nautical miles from Perryville respectively, wind coverage is less than 95% for all runway orientations at a 10.5-knot crosswind component. Nearby terrain at Perryville and at the other locations places this data in doubt as to its specific applicability to Perryville. Pilots report cross winds occasionally prevent landing at the airport. Runway orientation is determined by terrain and localized development. Wind data will be collected and wind coverage will be added to the ALP at a later date.

#### 4. Runway

The dimesions and components used for airports with reference codes B-II are listed in Table 3. per FAA AC 150/5325-4 and FAA AC 150/5300-13.

#### 5. Taxiway

The runway must be connected to the apron and aviation support area by taxiways. A perpendicular taxiway will connect the near-face of the apron and the runway.

#### 6. Apron

The apron design will meet or exceed surface gradient and area standards for transient Catagory A aircraft.

#### 7. Access

Access to the airport will be provided by a 18 ft wide by 2,128 ft long access road.

Table 3

FAA AIRPORT DESIGN STANDARDS (B-II)					
DESIGN ELEMENT	B-II STANDARD	NEAR-TERM	ULTIMATE		
Primary Runway Length	3,300'	3,300′	3,300′		
Primary Runway Width	75'	75'	75'		
Primary Runway Surface	Gravel	Gravel	Gravel		
Primary Runway Shoulder Width	10'	10'	10'		
Primary RSA Width	150'	150'	150'		
Primary RSA Length beyond R/W End	300'	300'	300'		
Primary Runway Protection Zone	500'x700'x1000''	500'x700'x1000''	500'x700'x1000''		
Primary Runway Object Free Area	L=3,900'	L=3,900'	L=3,900'		
	W=500'	W=500'	W=500'		
Primary Runway Obstacle Free Zone	250'x3,700'	250'x3,700'	250'x3,700'		
Primary Surface Width	500'	500'	500'		
Primary Surf Length beyond R/W End	at End of R/W	at End of R/W	at End of R/W		
Taxiway Width	35'	35'	35'		
Taxiway Safety Area Width	79'	79'	79'		
Taxiway Object Free Area Width	131'	131'	131'		
Taxiway Holding Position from R/W CL	125'	300	300		

# Table 4

AASPU RECOMMENDATIONS FOR COMMUNITY CLASS AIRPORT					
DESIGN ELEMENT	AASPU RECOMMENDS	NEAR-TERM	ULTIMATE		
Lighting	MIRL	MIRL	MIRL		
Apron	200'x300'	200'x322.5'	200'x322.5'		
	60,000 sf	64,500 sf	64,500 sf		
Aviation Support Area	100'x300'	100'x200'	100'x200'		
	30,000 sf	20,000 sf	20,000 sf		
M&O Pad	100'x100'	100'x100'	100'x100'		
	10,000 sf	10,000 sf	10,000 sf		
Equipment Building	Replacement	New	New		
Terminal	None	None	None		
Service Access	Separate Access	18'x2,116'	18'x2,116'		

#### E. Staged Development

Development of Perryville Airport for the 20-year planning period will occur in one stage, near-term. There are no mid-term or Long-term developments planned for Perryville Airport.

The primary objectives of the near-term development are:

- 1. Relocating the airport to provide adequate runway apron separation and to increase the airport's distance from residential structures in the community.
- 2. Upgrading airport features to B-II standards.

Near-term development will construct a new airport over the existing airport rotated approximately 8 degrees counterclockwise. The old runway will be decommissioned. Total project costs are estimated to be \$5,500,000.00. Work on the new girport will include:

- 1. Construct a new embankment for a runway safety area 150 ft wide and 3,900 ft long extending 300 ft beyond each runway end.
- 2. Build an aggregate surfaced runway 75 ft wide and 3,300 ft long with 10 ft shoulders.
- 3. Construct new embankment for taxiway safety area 79 ft wide and a total of 263 ft long.
- 4. Build an aggregate surfaced taxiway 35 ft wide by 263 ft long.
- 5. Construct a 84,500 sf aggregate surfaced apron, which is 200 ft by 322.5 ft, and an aviation support area 100 ft by 200 ft.
- 6. Construct a 10,000 sq. ft. M&O lot contiguous to the apron.
- 7. Build a new 18 ft wide by 2,116 ft long airport access road and 18 ft wide by 425 ft long apron access road surfaced with aggregate.
- 8. Install Medium Intensity Runway Lighting (MIRL) system along the runway and Medium Intensity Taxiway Lighting (MITL) system on the taxiway.
- 9. Construct a new double bay SRE building with an airport beacon on the M&O lot.
- 10. Install a segmented circle with lighted wind cone.

#### F. Property Status

The existing Perryville Airport is located on state property. Additional property is needed for the improvements which is under the ownership of the local and regional corporations that support the relocation and improvements to the airport. Sufficient property interests will be acquired to include the features of the ultimate airport in this plan.

#### G. Waste Disposal Facility

FAA recommends against locating putrescible—waste disposal operations within 10,000 ft of airports serving turbine powered aircraft and within 5,000 ft of airports serving propeller powered aircraft. The landfill for Perryville is located approximately 4,000 ft west of the airport. ADOT &PF will work with the community of Perryville to reduce the attraction of wildlife through landfill management practices such as covering waste promptly. There is no sewage treatment lagoon for the community as individual and community sewage is treated through septic tank wastewater disposal systems.

#### H. Community Involvement

The community of Perryville has been invovled in the planned development by the Alaska Department of Transportation & Public Facilities (ADOT&PF). Meetings were held to obtain comments and input from the local residents and Perryville IRA Council. The completion of this project requires a categorical exclusion that also provides opportunities for community input. Correspondence from residents, corporations, and local governmental officials remain filed with ADOT&PF, central region. The community supports the planned development.

# I. Non-Standard Conditions

Wind coverage at the proposed runway is unknown however, pilots have reported frequent cross-winds at the current runway which is oriented similarly to the proposed runway. Orientation of the new runway is determined by severe terrian constraints which also prevent the provision of a crosswind runway. Without wind data, it is unknown what increase in coverage if any that would be realized from a crosswind runway.

# J. Encroachments into Part 77 Surfaces

There are terrain encroachments into FAR Part 77 imaginary primary, horizontal and conical surfaces to the northwest, northeast and southwest of the runway. The closest penetrations to the runway are to be removed during construction of the runway. The closest penetration to the runway that is to remain is a rock knob 1320 feet northwest of the runway penetrating the horizontal surface by 30 feet.

## K. Future Land Development

The local government is encouraged to limit land uses in the vicinity of the airport to protect from operational impacts and to protect the health, safety and welfare of its citizens. Noise is one of the most common impacts encountered in the vicinity of an airport. Aviation noise typically extends beyond the boundary of the airport into areas where the airport has no authority. Noise problems can develop around airports if adequate limitations on incompatible uses are not taken. Land in the vicinity of the airport should not be used in a manner that creates electrical interference with navigational signals or radio communication between the airport and aircraft; makes it difficult for pilots to distinguish between airport lights and others, resulting as glare in the eyes of the pilots using the airport; impairs visibility in the vicinity of the airport; creates bird strike hazards: creates obstructions to air navigation; or otherwise in any way endangers or interferes with the landing, takeoff, or maneuvering of aircraft intending to use the airport.

## L. Appendix II Threshold Siting Criteria

There are no terrain object penetrations in the threshold siting surfaces of Runway 2 as defined in FAA AC 150/5300-13 change 7, Appendix 2, paragraph e.

There are no object penetrations in the threshold siting surfaces of Runway 20 as defined in FAA AC 150/5300-13 change 7, Appendix 2, paragraph a. Terrian beginning 4500 ft from the threshold of Runway 20 on centerline, elevation 260 ft. and higher violates paragraph b siting surface standards. Paragraph b surface elevation at this point is 252 ft.

AIRPORT LAYOUT PLAN CONDITIONAL APPROVAL SUBJECT TO ALP APPROVAL LETTER DATED ALASKAN REGION, AAL-600 F.A.A. AIRSPACE REVIEW NUMBER: 2004-AAL-165NRA DATE REVISIONS

STATE OF ALASKA **DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES** 

CENTRAL REGION APPROVED: HARVEY M. DOUTHIT, P.E. GARY E. LINCOLN, P.

DATE 1-5-05 DESIGN SECTION CHIEF CHECKED .

PROJECT MANAGER

PERRYVILLE AIRPORT

AIRPORT LAYOUT PLAN NARRATIVE REPORT

SHEET